THE

HORTICULTURAL REGISTER,

AND

GARDENER'S MAGAZINE.

APRIL 1, 1837.

Art. I.— *Landscape Gardening.*

There is in many persons even of intelligence and liberality of feeling, a secret recoil at the mention of ornamental arts — a fear that their introduction among our citizens would prove inimical to that virtue and simplicity of manners, which can alone establish and perpetuate our institutions. This is a natural feeling, and doubtless to a certain extent arises from just views; but when entertained towards those arts which serve only to improve the intellect and purify the taste, it does them great injustice. Indeed, their cultivation, instead of being connected with luxury and licentiousness, will often be found to operate as a check upon these evils; and this we believe is especially the case with that art which serves to improve the attractions of the country, and to render more delightful the enjoyments of home.

A remarkable characteristic of the people of our nation, is a fondness for change. This is beneficial to a certain limit, as it impels to industry, to enterprise and improvement. But it is often carried to such an extent as to become a positive evil. It results in a restlessness of habit which approaches that of some of the wandering nations of Asia. We are dissatisfied with the present good. We let go the happiness within our power, and grasp at other enjoyments, often beyond our reach. This constant motion and unsettlement cannot do otherwise than exert a pernicious influence. Even the permanency of our republican edifice is hazarded by it, for what foundation can endure upon a moving mass of sand?

And how is this to be prevented, how is this evil to be overcome? A powerful means would certainly be to induce a taste for moral improvement, and for embellishing the scenery about our homes, which would greatly contribute to the increase of our attachment to them, and to make us satisfied and contented. A love of nature, it is said, is a love of our country; not less so, then, is nature when improved by art, and applied by our own hands to increasing the attractions of our native land.

The moral effect of improvements of this nature has been frequently pointed out. "In Scotland," observes a late writer, "the regularity and polish even of a turnpike road, has some influence of this kind upon the low people of the neighborhood. They become fond of regularity and neatness, which is displayed, first upon their yards and little enclosures, and next within their doors. A taste for regularity and neatness, thus acquired, is extended by degrees to dress, and even to behavior and manners." The fascinating beauty which sometimes distinguishes "the cottage homes of England," where roses, honeysuckles, and jasmines, cluster around the white walls, is said to contribute powerfully to the preservation of the moral habits of the occupants, by inspiring a taste for domestic enjoyments, instead of a desire for the company and noisy bustle of the tippling shop.

In urging the importance of a greater attention to landscape gardening, we are far from desiring an extravagant outlay of expense. We never wish to see in this country, such an extent of ornamental grounds, as is so frequently to be met with on the other side of the Atlantic, where whole square miles are exclusively appropriated to this purpose. Our object is not so much to recommend expenditure, as to *direct* it in such a way as to produce the greatest effect. We must remonstrate against the exceedingly unwise method, so repugnant to all taste, in which the improvements of a farm are not unfrequently commenced and carried on. The first thing, when a spot is fixed on for a house, if it be in a new country especially, is to cut down all the native trees and shrubs within several rods of it. The proprietor then sets to work and applies his whole resources to build as large a house as possible. When the work is completed his funds are exhausted; he can make no further improvements about his house; it is left standing, dreary and alone, perhaps unpainted, an unsightly broken fence to enclose

it, and the nakedness of the yard only relieved by an old barrel, a pile of wood, and broken hoops and boards. Sometimes indeed a more finished appearance is presented; the house is neatly painted, a handsome grass plat extends before it, and a picket fence encircles it. But still there is a sad deficiency in shade. A row of Lombardy poplars, or half a dozen plum trees, are the most it can boast of. Now, instead of expending so much in erecting large and showy buildings, let at least a small sum be reserved for improvements in planting trees and shrubbery. Half an acre of ground about a house, and fifty dollars appropriated to planting it, would contribute far more to its appearance, than two thousand dollars expended in additional embellishments of the house alone.

There is no way in which the same amount of ornamental effect can be produced as by planting. Look for instance at some of our villages which are proverbially handsome. What gives them their beauty? Not the architecture, for this frequently has but comparatively a small share. Many villages are by no means beautiful which have even a lavish expense bestowed upon their buildings. It is the taste displayed in introducing the graceful trees with which the streets are decorated; it is the ornamental shrubbery which embellishes the small yards in front of the neat private dwellings; and all this is effected at a most trifling expense.

But as planting alone, without a judicious arrangement, cannot produce nearly so pleasing an effect as where such arrangement is adopted, we shall proceed to offer some hints upon the subject.

A garden has been defined as "a place where, by the aid of culture, vegetable productions may be raised, more excellent in kind, and more pleasing in distribution, than in the ordinary growth of nature." An ornamental garden, therefore, is where the beauties of nature are accumulated on one spot, freed from a mixture of what is unsightly or not positively pleasing, and arranged so as to form the most agreeable assemblage as a whole.

Formerly it was the universal practice to dispose all the parts of ornamental grounds generally, in squares, right lines, circles and other mathematical figures; and a regularity of arrangement was observed amounting sometimes to the utmost stiffness. This has, and more especially as it relates to shrubbery and trees, given way to the modern and more improved style; to freer and more varied forms; to a plan of embellished nature, imitative of the scenery of

a real landscape. The old style addressed itself more to a love of *novelty* than to the taste; hence grotesque and imitative forms were largely introduced; trees were shorn into the form of pyramids and statues, hedges were made to resemble smooth walls, and every effort was made

> To form with verdure what the builder formed
> With stone.

From the novelty of such objects, many, even at the present time, prefer the old style, but the pleasure arising from this love of novelty is soon exhausted. But the almost endless diversity of the natural landscape presents an inexhaustible store of new forms.

The uniformity produced by straight walks and alleys bordered by regular rows of trees, another characteristic of the old or geometrical style, though pleasing at first, soon becomes tiresome. The visitor enters the ground and passes from walk to walk, and it is all the same. The dimensions shrink, from this uniformity, and however finished it may appear, it ceases to interest him. He looks along the long straight walk, and though it may be lined with beautiful trees, it is only a repetition of the same thing over and over, and why should he go further? No new beauties are to be developed; he finds the same long vista constantly before him; he becomes fatigued and turns listlessly away. But let the walks be winding, and every step leads to some new scene; every turn displays new and constantly varying beauties. The geometric style, however, though frequently, is not always necessarily connected with uniformity; and whenever it is adopted by those who still prefer it, as great a variety as possible should be studied. Thus for instance, let the walks be of every variety, now broad and open, now shaded and narrow, at one time opening on a distant landscape, at another leading to a rocky glen, a cascade, or a fountain.

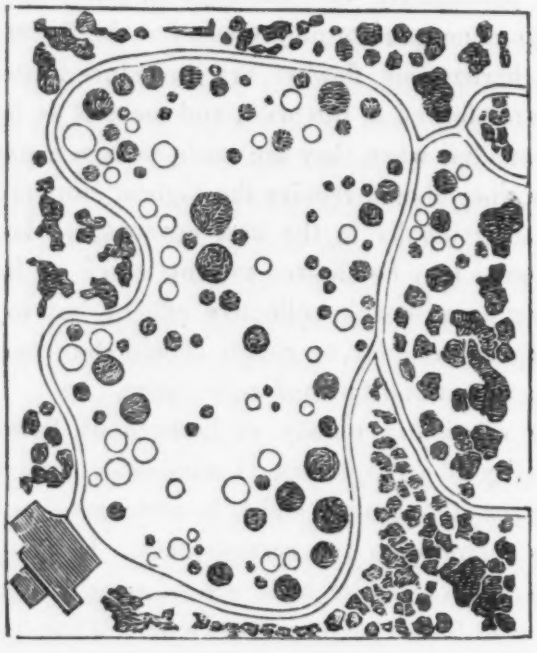
Confining ourselves to the modern or natural style, we shall proceed to offer some remarks on its characteristics. Landscape gardens in this style generally present either picturesque, or what is termed gardenesque scenery. Picturesque scenery is a fac-simile imitation of natural scenery; the trees and shrubs constituting it are planted, as in natural forests and forest-groups, such as a painter would wish to copy; every appearance of art is concealed, and it exactly resembles a real landscape, except in the greater variety and profusion of pleasing assemblages within a smaller space than

can be found in nature. Its effect as *a whole*, only, is studied. In gardenesque scenery, not only the general effect is studied, but the separate beauty of the different trees and shrubs, and herbaceous flowering plants, are also displayed; art is not concealed, and although the effect of the individual parts at a near view is sought, yet at a distance the whole appears to group so as to form a pleasing whole, as in picturesque scenery. The picturesque is calculated to please particularly the admirers of landscape scenery in nature; the gardenesque not only these, but the florist and botanist also. When herbaceous flowers are introduced into picturesque scenes, they are allowed to run wild, and the soil is left uncultivated about them; but when they are made to form a part of gardenesque scenery, they should receive the highest cultivation, so as to exhibit them individually to the best advantage. In picturesque scenery, the trees may be allowed to grow thick or irregular, provided they form an agreeable collective effect; but in the gardenesque, every thing irregular or rough should be removed, which would prevent a neat and finished appearance.

In gardens consisting chiefly of herbaceous flowering plants, greater regularity of arrangement is admissible than in one comprising only trees and shrubs; and is in some cases to be preferred, as less skill is required in the arrangement. In general the best effect is produced, where the beds are of regular figure, and are arrranged so as to form a picturesque whole. Thus, in the accompanying plan, (Fig. 1,) the beds are all regular figures, being circles. "The simplicity of the circular form," says Loudon, "is a great recommendation to it, both in point of beauty in itself, and in regard to setting off the flowers to advantage, each circle being as it were a nosegay; it is besides the most convenient form for culture, and for renewing the soil. The different diameters of the circles, and their different disposition on the turf, will produce a variety and intricacy of outline, that cannot be attained by any other means whatever." In the plan here given, the large beds are supposed to be planted with flowering shrubs, and the smaller chiefly with flowers. The best effect is produced where shrubs and flowers are planted in separate beds, not only because they do not harmonize when too closely intermixed, but they cannot be cultivated to so good advantage. One of the most common errors, and one of the greatest defects in most ornamental gardens, is that of

promiscuously mixing these together. The beds in this plan are never nearer to each other nor to the walk than a certain distance, for instance three feet. They may be from three to to twenty feet in diameter. The intermediate space is a "dry smooth shaven green;" and a winding walk passes round the whole, beyond which are groups and masses of the larger trees. It will be ob-

Fig. 1.



served that, as the garden has the greatest extent diagonally from the house, it is left open in that direction, in order to give the appearance of a more extensive prospect. The above plan, with a few alterations, is taken from Loudon's Magazine.

Where herbaceous flowering plants alone are employed to fill the beds, the same rules of arrangement will apply, substituting the taller for the shrubs, and placing the more humble in the smaller beds. Their size should, however, in this case be diminished.

The disposition of the plants in the beds, so as to produce pleasing assemblages, as well as to harmonize in forming a whole, is a subject for the exercise of much thought and skill. In general those plants which are placed in close proximity, should not be widely different from each other in some leading expression of appearance. For instance, each group or mass may be limited for the most part to varieties of the same species, or to species of the

same genus. In others, different genera of the same natural order may be comprised within a bed. Evergreens, such as pines and spruces, should be grouped together; and broad and narrow leaved plants should unite, each in their separate clumps; as the magnolia and tulip tree on one hand, and the acacias and Robinias on the other. Sometimes, however, a resemblance in some points, and a contrast in others, produces a pleasing effect. In a small flower garden, says Loudon, "which I very much admire, I have seen a group composed of myrtles and China roses, placed alternately in quincunx order, the larger plants being in the centre; and in my opinion, a better effect was produced than if the two species had been in separate masses; the rich green color of the myrtle's leaves, forming a ground to the beautiful white of the flower; the light and elegant foliage and pendant bloom of the rose; the mingled color and the associations connected with both, made an impression upon me which I shall not easily forget. In the same garden there is a group consisting of an acacia, a sumach, and a labarnum. The light feathery elegance of the acacia, the broader and more shadowy plumes of the sumach, and the pendulous clusters of flowers of the labarnum, compose a little picture of the most highly finished character."

In forming plantations of trees and shrubs, so as to produce a pleasing landscape effect, few rules can be given which would apply generally. The difference of natural situation, and of aspect, and the various features of different grounds, would preclude the attempt of giving minute directions suitable alike for all situations. There are, however, many rules which may frequently apply, and which, by the aid of a moderate judgment, may be adopted or rejected as circumstances dictate. And there are a few which are in a greater or less degree adapted to all cases.

In grounds of any considerable extent, the view of the whole should never be taken in at once; but it should be so divided into different scenes or compartments, which may be bounded by trees, that only a small part is visible at first to the spectator; but as he advances, new and varied prospects open upon him, so that he is agreeably surprised to find, that what at first seemed to terminate his view, only served to introduce him to new beauties.

The same or similar scenes should never be twice presented to the eye; hence there should be as great variety of objects intro-

duced as is possible. Sometimes the walk should be densely bordered or overhung with foliage; at others it should open upon beautiful or extensive prospects: one while it may lead beside a running stream; at another it may present "cascades, rocks and caves."

But variety should never be introduced at the expense of order, or proper relation between parts; but the different scenes should follow each other in natural and pleasing succession. The spectator should never be startled or taken suddenly by surprise, for that is the lowest kind of art. He should not be led from the flower garden to the stately forest, without passing through the intermediate grades; the level, the hilly, the smooth, the rocky, the chaste and finished, the wild and rude, should not follow each other at random or so as to produce violent contrasts, but by free and natural succession.

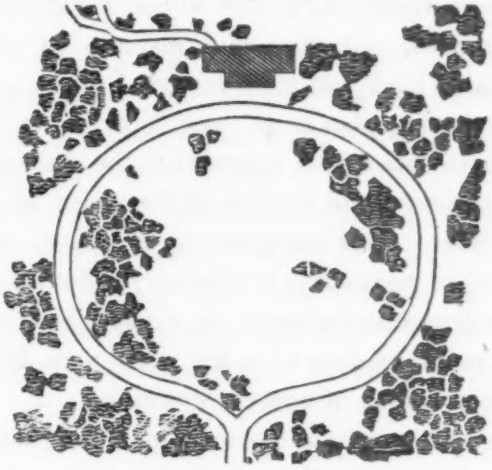
A frequent error in landscape gardens, is a multiplicity and confusion of objects. So many things are crowded together, that the spectator does not know to which to direct his attention first. The walks are often so numerous and so intricate, that they only serve to perplex. This may be easily avoided by adopting as a rule, that there shall be but one principal or leading walk throughout the whole. It may, by easy curves, be conducted in sight of every material object of view, and return finally to the place of entrance. In this way the same scene need never be exhibited twice. From this main walk there may be branches, to exhibit different scenes in detail; but it ought to be an invariable rule, that these episodal walks should never be one half the width of the principal walk, and should always branch off nearly at right angles from it, so that a stranger may never mistake one of them for the main walk. Where flowers are introduced they should commonly be in beds near the walk, while the taller shrubs and trees should be placed back more at a distance.

At favorable points, and those only, should the view be left open for more distant scenes. Sometimes by a judicious arrangement, the same objects seen from different places, may be made to present quite different aspects by appearing to group differently. The walk should be so directed as not to exhibit these views except at the most advantageous points. A bend in a walk should always exist from some cause either real or apparent. An apparent one

may always be produced by groups of trees, appearing to require it, where no real one exists.

Architectural and other ornaments may be introduced, according to the means of the proprietor. When properly distributed they add much to the effect. Seats and arbors should be placed at points affording interesting views, alcoves and rotundas on eminences, and hermitages in secluded places. Foot bridges are always pleasing where there are streams. Fountains are going out of use, though we think without sufficient reason. In more frequented grounds, such as public squares in towns, we think them particularly appropriate. We would not, however, propose even for these, such expensive fountains as are frequently seen in Europe, where water is poured forth in immense volumes in marble basins, amid tritons and sea horses, and cars. A single streak of water would be a more pleasing object. A late writer thus speaks of a simple fountain in Marseilles in France. "It is a large basin of water elevated five or six feet, and handsomely sodded around; from the centre shoots up to a great height, a simple, delicate silvery jet. I have seen the splendid fountains in the portico of St. Peters at Rome, but they did not affect me with half the pleasure that was given by this simple small stream amid the green well arched trees."

We shall conclude this article with a few remarks on planting the grounds in front of mansions and private country dwellings, a



subject in which all should be interested. Few are able to devote much ground or much expense in extensive ornamental planta-

tions; but all may decorate the immediate vicinity of their resi dences.

The house should be situated at some distance from the road, which distance should be greater or less according as the house is large or small, and it should be on a moderate rise of ground, There should be a spacious open lawn or grass ground in front, which should be unoccupied by any objects except an occasional small group of trees, and these should be placed a little on one side or the other, leaving the centre open. The front of the house, especially if it be of finished architecture, should be uncovered, or nearly so; while the other sides may be planted with thick groups of trees which may extend towards the public road, widening as they approach it, and contracting towards the house. The best view of the surrounding grounds should never be displayed until reaching the house. If it is situated on an eminence, the back as well as front view may be exhibited to great advantage, and the effect will be heightened if a view of water can be then enjoyed. Limited prospects and neighboring buildings not worthy of notice, may be concealed by plantations of trees. The appearance of distance may be increased by planting trees of dark green and large dense foliage on the foreground, and those of light and airy foliage in the distance; this will produce the same effect as shades in a landscape picture. Trees and shrubs in front of the house should be planted and pruned so as to present a chaste and neat appearance; imitations, therefore, of the wilder scenes of nature, such as rocks, cascades, old trees, and festoons of climbing plants, should be situated back and more remote.

The accompanying plan is of such a place as any farmer in comfortable circumstances is supposed to be able to possess, and only represents the ground in front of the house, as few would wish to undertake more. It is not given as a model, for it doubtless might be varied in most cases to advantage, but in order to represent the usual disposition of trees in groups and masses; and to show that the mere planting of a few trees may be made to add much to the appearance of country dwellings.

One of the most common errors which we have observed in planting about houses, is that of placing trees in straight rows, without any regard to the stiffness it produces. A less frequent error is the opposite extreme; an excess of irregularity is intro-

duced, and a tedious monotony is produced by this indiscriminate mixture. Sometimes we see a large lawn in front of the house, with a line of shrubs and trees running round it, just broad enough to admit a gravel walk winding through it, which by many short irregular twists and turns, opens alternately upon the lawn and boundary fence, thus continually presenting the same thing over and over without any variation, and producing a sort of *uniform irregularity*. Walks perfectly straight would be much better, for then there would be no failure by attempting to accomplish too much.

In conclusion, we would remark, that our principal object has been to call attention to this interesting subject. We would not wish our readers to follow implicitly any rules laid down here or elsewhere, but to cultivate their own taste and use their own judgment. Although we have but few instances of fine landscape gardening in this country, yet an inexhaustible store of ideas may be derived from the beautiful and ever varying natural scenery which our country so richly affords. Much too, may be learned from some of the excellent works which have appeared on the subject. If we have succeeded in drawing the attention of our readers to these, we shall consider our efforts as not in vain.—*Gen. Farmer.*

ART. II. —*Caterpillars.* Extract of a letter from Sydney, C. Briton, N. S.

I HAVE read the article on Caterpillars in the Horticultural Register. Nothing there is applicable to *my* Caterpillars. They first make their appearance very minute, on the *edges* of the Gooseberry and Currant leaves, as early in the spring as the leaves are produced. They always eat on the *edge* of the leaf, and soon strip the bushes completely. They are then about three quarters of an inch long, of the color of the leaf, and what becomes of them I cannot tell. By the time fresh leaves appear, new swarms are ready, though at first so minute, it requires a good eye to perceive them, but the destruction they commit, soon points them out. Thus, the bushes produce leaves, and are as regularly stripped of them, several times in the season; of course they dwindle and die. I have often gath-

ered all the Caterpillars from a few bushes, but it is of little use, as they are soon attacked again. The insect is green all over, round bodied like a quill, and smooth. I never observed them in proceeding along the ground, when shaken off the tree, to go otherwise than with a regular creeping motion, but when disturbed feeding on the leaf, they invariably draw one end up to the other, hunching their backs as if about to set off in the manner of the Caterpillars, called " Surveyors." I have tried all the methods of extirpation I could think of, or which I have read, to no sort of purpose. What is curious, they appear confined to my premises, I cannot learn that any other person in the place knows anything whatever about them. With me, they effectually prevent the growth of Currants and Gooseberries, except the black Currants, which they never touch. Raspberries are also destroyed by Caterpillars of the same color and habits, except that they eat the leaves in *holes* instead from the edge; and these insects differ from the others, in being rough or hairy, but quite green — they live on the *upper* side of the leaf. These, also, appear peculiar to my grounds. No one else knows them. If any of your scientific correspondents would throw some light on the subject, and give me any information by which I could get rid of these tormentors, they would greatly oblige me.

ART. III. — *On the Appearance and Metamorphose of the Lower Vegetable Organizations.* By Professor HORNSCHUCH, of Greifswald. Translated from the German by Andrew R. Rud.

To find out the influence of the soil on the formation of the musci (mosses,) in the year 1821, I filled several small pots with different species of soil which had been exposed to a glowing heat, that if there were any spora existing in it, it might be destroyed; the pots were then put in a summer box or frame in the botanical garden, where they shared equal care, receiving the same quantity of water and exposed to the same influence of light. A longer time passed before organical functions appeared than is required for soil not exposed to heat; but the formation once begun, the growth of the moss plants was very rapid. The pots were provided with saucers, which at all times were kept filled with water from the same res-

ervoir. The moss plants had soon gained height enough, so that the *genera* to which they belonged could be designated, and the following results appeared. The pot filled with a poor clay, and which had first shewn a yellow green, almost glittering cover on its surface, developed confervæ-like forms, which combined themselves into moss plants, that most evidently belonged to a species of *Barbula*, without doubt, *Barbula fallax*. The second pot, filled with clean sand, produced on the surface a very thin cover, and to the naked eye, almost imperceptible confervæ-like threads, presenting a few bunches of moss plants, which most evidently characterized themselves as *Byrum argenteum*. The third and last pot was filled with leaf mould; on its surface first appeared a cover of dark green slimy substance, from which was afterwards developed confervæ-like threads, and finally numerous moss plants which characterized themselves as *Mnium*, and probably *Mnium hornum*. But the most striking result was from a pot divided by a partition into three parts. Each of the partitions was filled with one of the three named species of soil, and the young moss plants in each partition, corresponded exactly with those in the pots containing the same analogous earth.

After the process had proceeded thus far, my observations were interrupted, as I was obliged to be absent on a long journey. When I returned, the summer box was broken up, and the pots put away and partly emptied; thus the experiment was disturbed. As the aim of the observations was only to find out the influence of the soil on the generation of the musci, under otherwise equal influences, I did not analyze the lower vegetable organizations, which went on before the formation of the mosses, in respect to their genera and species. The result of their observation goes to prove, that under equal influences of light, moisture and temperature, different mosses are generated, in the different species of soil in which they are produced. The longer time necessary for the generation of the vegetable formations, in the soil exposed to heat, may be accounted for by the fact, that all the organical substances are disturbed by the heat, or at least altered and made far less soluble; and the greater quantity of vegetable formations in the pot filled with leaf earth, is caused by the superior richness of that species of soil in organical substances.

Remarks, by Andrew R. Rud. — The preceding experiments are of that kind to which many objections may be given, as to the preparation and management of the soils, &c. Every one who is interested in the case, will not trust too much upon the experiments of others, but try for himself. The greatest objections to these, are, that the seeds may be given to the soils by the air, or by the water. If the pots had been covered with bell glasses, and watered with distilled water, the objections would have been far less. As for the preliminary formation of slime and confervæ-like threads, it may be said that the *musci* are plants of a higher order, and therefore require a soil more provided with nourishment than the first rudiments of all vegetable organizations. As for the three different species of soil, producing three different species of moss, it may be, that like some of the other lower vegetable formations, they can only thrive under certain circumstances, or are highly depending upon the surrounding medium, and that this medium or these circumstances may promote or retard their development. The cultivator sees in his every day's experience, that plants in a healthy state permit no *cryptogames* to vegetate on them, while unhealthy plants abound in them, and they are more or less numerous, according to the circumstances which produce the disease. These experiments are highly interesting, and open a wide field for reflection to the philosophic mind. It might, perhaps, have been possible, to have given these experiments a practical utility, by ascertaining how the mechanical mixture of the soils, promoted or retarded the growth of the different species, in various soils from the pure pulverized granite, to the purest vegetable mould. The gardener has remedies enough to disturb the moss vegetation, but yet some of them like to know the laws, why they do so or otherwise.

Art. IV.—*Shepardia or Buffalo Berry.—Winship's Nursery, Brighton, Mass.*

Friend:— You know we were old confederates in robbing the morn of certain hours, which dairy maids and other early risers say belong to her.— With all the prejudices of early education,

strengthened by long habits of sloth in the morning, I had become a confirmed skeptic in the hearing of any such statement as that there is such an hour as 6 A. M., and such a daily event as sunrise. Anxious to be convinced, I directed a trustworthy person to give me a call at that rumored time of day, and "to make assurance doubly sure," as Shakspeare says, I fixed my alarm watch so that its tintinabulation should break the dead ear of morn, at the precise time aforesaid, 6 A. M. Well, between them both, I was actually awakened — rose — and drew on my habiliments.

One daring deed accomplished, leads to the attempt of others. I sallied forth to enjoy an antebreakfast walk in mid winter. It was a piece of temerity I know, but a man who can turn out at 6 A. M. can do anything "strange and unnatural." Chance led me in my peregrinations within hearing of the depot bell of the Worcester Railroad, and all at once it happened to pop into my head that your old friends, the Messrs Winships, or, as we style them the Captain and the Squire, enjoy all the inconveniences of a convenient distance from the metropolis, at Brighton, four miles out. With an aptness of memory which can only be conceived by one who wants a breakfast, it also occurred to me that I had a standing invitation from those gentlemen to visit them whenever it suited my leisure — and when so suitable a time as when I had redeemed three hours from sleep? Of the reception I met, and all that, I will not tantalize you by speaking. The nursery of young, useful and ornamental trees, looked more extensive in its winter desolation, than it looks beautiful in its summer foliage — just like any nursery except — and the exception is one half the reason of my writing — very tender affection for you, and self-laudation being the other half.

It was neither more nor less than a fruit tree in full bearing. In a green house? you say. No. Not only had it been exposed to all the rigors of the winter, but it takes a smart chance of frost to bring its fruit to maturity. I enquired its name and the Captain called it the Shepardia eleagnoides. Whereat I requested him to pencil that name down for the benefit of my botanical friends, and to give me another which I might use in the vernacular. He then offered me the silver leaf Shepardia, but that had still a smack of the pagan in it, and to accommodate my predilection for a Christian name, he then told me that I might call it the Buffalo Berry Tree.

It will live in almost any climate — the harder the better — being a native of the Rocky mountains. The tree forms an elegant continual ornament for any gentleman's grounds; being in summer clothed with a rich egg-leaved foliage, bright green on the upper side, and delicate silver beneath; and in winter red, with thick clusters of its fruit. This latter is in size and shape like a currant. and in taste has a pleasant tartness, which I can liken exactly to nothing else I have tasted. Preserved, it makes an elegant jam, They have quite a nursery of fruit-bearing trees, ready for transplanting in the spring. The parent tree, now about twenty feet in height, was raised from seed, received per mail from Wm. F. Redding of Baltimore, 15 years ago. Uncle Sam's mail carriers had no fancy, when transporting the letter, that they were carrying an elegant feature of the New England landscape — or what will be an elegant feature when people become acquainted with the tree. If they are not persuaded to transplant it to their grounds for its own sake, they will certainly give it the preference over others, when the matter of planting trees is decided on, without reference to this particular one.

Its name indicates the fondness of wild animals for it; and hunters frequently make it an essential part of their food, even before their stores are exhausted, or much diminished. The Captain has quite a bevy of pensioners in the robins, who, by wintering with him, seem tacitly to accuse the southern climes of having noth ng better to offer them than the Buffalo Berry — sometimes called the American Olive, but why, I cannot exactly imagine.

After sufficiently admiring the tree, and the green-house of the Messrs Winships, one of those gentlemen politely offered me a seat in his chaise, and took Watertown in the way to Boston, to call at Mr Cushing's place, and at Mount Auburn.— The first feature that strikes the visitor at the conservatory of Mr Cushing, is its peculiarly happy location. A grove of pine trees (natural growth) protects it from the easterly winds, and the approach to the mansion, is an avenue shaded by forest trees. A fountain is in the centre of the area — sealed, of course, in the winter season, and extensive ranges of trellis work for grapes and other vines, with a floor of strawberries, &c. must make the space before the green-houses one of the most delightful spots conceivable in its season. Should I protract my visit to this *Northern* world into the summer, I shall

take opportunity to enjoy a visit to it — as I certainly shall to the Messrs Winship. Entering the greenhouse, the first object which strikes the visitor, is the disposition of a number of beautiful orange trees, so arranged that their yellow fruit is an admirable contrast with the deep green foliage of other plants, which conceals all their trunks. Time and space would fail me, to enumerate even the names of the rare and beautiful exotics from every quarter of the globe, which are here collected; much less is it possible to attempt a description of them. All commendation is due, however, to the pure taste which led the proprietor of this Eden thus to appropriate a portion of his abundant means — and all praise should be accorded to Mr Haggerston, the intelligent gardener, for his share in the disposition and culture of plants requiring so dissimilar management as is supposed, by their various origins. It does appear to me, that no person who lives thus "among the roses" can be but improved and rendered better, kinder, and more susceptible to the best impulses of our nature, by converse and communion at all times with the most beautiful things in creation.

At Mount Auburn, we did not alight. Had we done so, my space would not suffice to enter into a description. The aspect of the spot as we passed it, suggested only the gloomier thoughts of which death is the prompter — but with that gloom came relief, from the natural connexion of the promise of the return of spring, the regeneration of the vernal features of the place, and the beautiful mystery of the resurrection from the dead, taught by our holy religion. Yours, ——.

ART. V. — *New or Handsome Flowering Plants.* Noticed by the Editor of the Floricultural Cabinet, in England.

DURING the last summer, we have taken two tours, and visited many of the principal gardens in the country, as well as nursery establishments, with the intention of seeing what new plants were deserving of recommendation to our readers. The following list contains a portion of what we saw, and all of which are showy and interesting.

Buddlea madagascariensis. — A greenhouse species of great

beauty, and blooming for a considerable season, well deserving a place in every collection.

Bignonia jasminoides.— A noble looking plant, with large dark green leaves, and fine trussses of flowers. It is well worthy a place in every greenhouse. It is probable that it would bear the open air like the other species.

Solana Lambertiana.— This is a fine large leaved species, bearing a corymb of pretty purplish blue flowers, which are rendered still more striking with its fine yellow anthers.

Clematis azurea.—This new species is most beautiful and deserves a place in every greenhouse or conservatory. It has been lately introduced into this country, but from whence we know not. We saw it blooming freely in the greenhouse of Mr Lowe, Clapton Nursery, near London. It is a most valuable acquisition. Being a climber, it will be peculiarly adapted for making a show up a pillar, along a trellis, or trained up a wire frame. The plant appears to grow freely in a rich loamy soil.

Spirea argenteo.— Silvery leaved. A hardy shrub of great beauty, bearing handsome reddish colored blossoms.

Gesneria splendens.— A most strikingly handsome flowering species, and which we were informed would flourish freely with a greenhouse temperature. The flowers are near two inches long, of a brilliant scarlet color, marked with a very dark crimson spot. The plant produces a profusion of blossoms. It deserves a place in every collection.

Nuttalia papavar, var. grandiflora. — The plant is nearly hardy, and blooms freely. The flowers are of a deep rosy red color, each of which was from two and a half to three inches in diameter. The plant well deserves a place in every flower garden.

Phlox Drummondii. — A figure of this beautiful flowering annual we gave early this year. We have seen three kinds in bloom, the original species, and two varieties which are very handsome, one of the varieties has pink colored flowers, and the other very nearly a velvet color. There are some other varieties which we saw, but not of equal interest with those we mention Every flower garden should be ornamented with these plants, and when grown in pots in a greenhouse, they are fine summer ornaments for the purpose.

Cytisus elegans. — A new and handsome yellow flowering species, requiring, as we understood, to be grown in the greenhouse.

Hova illicifolia. — A fine flowering species, with handsome foliage, it deserves a place in every greenhouse.

Manettia glabra. — Its very handsome trumpet shaped flowers, of a fine red color, and produced in profusion, renders this plant more desirable for the greenhouse. The plant may be obtained, two or three feet high for half a crown; no person, we think, would regret the purchase.

Poinsettia pulcherrimus. — This plant is becoming much in repute, that part of it, which answers the purpose of a splendid flower, is the bracteal leaves; they extend to the dimensions of from twelve to twenty inches across, and are of a fine crimson-red color, at once most strikingly grand. It will require a hothouse temperature, we are informed, though we saw very healthy plants growing in a greenhouse in October. The price of a small plant would be £2, and of a plant three or four feet high, from £7 to £10.

Tropæolum. — A new kind with *fine yellow* flowers, the form of T. tricolorum. Being produced in abundance, renders it a desirable species; Mr Thompson, Nurseryman, Beaulah, near Norwood, Surry, has fine plants of it for sale. It has been imported from Valparaiso. Mr Thompson offers plants of it at one guinea each, and they are well deserving the price.

Rhododendron ponticum var. flora plena, Double flowered. A very pretty lilac purple flowered variety; it deserves a place in the shrubbery.

Gillardia picta. — The profusion of beautiful blossoms which this plant produces, renders it one of the most showy. The large crimson red centre, margined with bright yellow, and the flower two inches across, makes a splendid appearance. We recommend it for every flower garden. Plants may be obtained at two shillings each; or seed may be procured at a reasonable charge.

Verbena pulchella alba. — This is a white flowering variety of this pretty creeping plant. Very suitable for rock-work, or dwarf edging for a bed, or border — it is cheap.

Verbena Drummondii. — Much the habit of V. Lambertii, but much more robust, having flowers larger, and of a deeper rosy-red color. It may be procured at two shillings each.

Salvia leucantha. — A very pretty species which we saw growing in the select and well managed collection of Mrs Marryatt, Wimbledon. We shall give further particulars of many scarce and valuable plants we saw in this enchanted place.

Silene flos aculi plena, Double flowering. This is a very pretty flowering plant; very free in blooming. The flowers are of a rosy-lilac color. It merits a place in every flower garden.

Gardoqii Hookerii. — A most beautiful flowering plant, which deserves a place in every greenhouse. The plant is a most profuse bloomer; the flowers, each an inch and a half long, of a fine orange-red color, producing a most imposing appearance. The plant appears to grow freely in sandy peat. It strikes well from cuttings; the old plants are apt to die off, but a supply of young plants should, we think, always be kept up. No person will regret the purchase of the plant — it may be procured at a moderate cost.

Lantana Cellowii. — A very pretty flowering species, of recent introduction.

Brugmansia aurea, Golden flowered. The flowers are larger than those of B. sanguinea. It is a very desirable species to cultivate with the suaveolens and sanguinea.

Linum cummingia. — A very handsome flowering flax, with very pretty yellow flowers. The plant deserves a place in every greenhouse.

Pultenea subumbellata. —This is a very handsome flowering plant; its neat growth, pretty flowers, and profusion of them, recommend it to every greenhouse.

Samolus prostrata. — This is a pretty flowering greenhouse plant, flowers freely. The blossoms are small, but very neat.

Frankenia pauciflora. — The specific name very ill accords with the profusion of flowers produced. The plant merits a place in every greenhouse.

Pultenea vestita. — A very handsome flowering plant of this neat and pretty tribe. It is far the handsomest of any we know, and deserves to be in every greenhouse.

Rubus Chinensis. — A new species, of singular and pretty growth. We have heard this plant very highly spoken of, and recommended to every collection of greenhouse plants. It was not in bloom when we saw the plant, but if we recollect right, the flowers, it was said, were large and of a pink color.

Melaleuca. — A new species, the specific name not known. It is of a dwarfish habit, bearing abundance of flowers of a fine *pink* color. This deserves a place in every collection.

Statice arborea; *S. foliosa*; and *S. puberala.* — We saw plants of these new and fine flowering species at Mr Lowes; the two latter we

have seen in bloom, and consider them pretty. We have been informed that twentyfive pounds per plant, is asked for the first named kind, by the nurserymen in Scotland, where it has bloomed, and attracted considerable notice.

Euphorbia Jacquinii. — A new and handsome species, the flowers something like Poinsettia pulcherrima. It deserves a place in every collection. If we mistake not, we were told it would flourish well in the greenhouse.

Gompholobium mucronata. — A beautiful flowering species — the yellow and red blossoms being produced in profusion. It is a very desirable plant for the greenhouse.

Solanum arborea. — A fine looking stove species, producing large lilac colored blossoms, making a pretty appearance.

Stephanotus floribundas. — A very neat and pretty flowering plant, making a pretty appearance in September, October and November; very ornamental to the greenhouse.

ART. VI.—*On the Repotting of Greenhouse Plants, &c.* By a Practical Gardener in Staffordshire.

ON account of the variety and number of greenhouse plants, it is rather difficult to reduce them to any one certain rule; not only because they are less expensive, and consequently more cultivated, but also that our milder climates, are found to produce plants in greater abundance than the Torrid Zone.

Therefore the business of shifting is, in general, a weighty concern. To be enabled to execute this business with regularity, every preparation should be previously made, and the different sorts of mould laid up in a shed; as well to keep them from becoming too wet for use by sudden showers, as from getting too dry by the action of the sun, or arid winds which may be expected at this season. Also on wet days (if nothing more urgent is to be done) let a quantity of old broken pots be made small, to serve for draining to the tenderer sorts; the coarse siftings of peat being sufficient for the stronger growing kinds.

Things being thus in readiness about the middle or end of May the general shifting should be commenced; in order to which, let

some of the plants be carried to the shed, and carefully proceeded with in the manner already directed for hothouse plants; observing, above all things, not to injure the roots, but gently to loosen them with the hand in such a manner, that the mat of roots, which is generally formed on the outside, may not remain entire; whereby they will soon strike into the fresh mould that encompasses them.

Greenhouse plants for the most part require a considerable share of pot room, as many of them are very free growers; but still great caution is necessary, to avoid over potting the tender weak growing kinds. When shifted, let them be tied up if requisite, and well watered. It will be also necessary to shade them for a few days from the influence of the sun and winds, until they are perfectly established in the fresh mould. Any dead or ill-grown parts can now be with propriety cut away, so as to give their heads a regular neat appearance: by observing this process, it will be found, that though a temporary check may be the consequence, they will soon flourish and do much credit to the operator by their healthy appearance and progress.

It being mentioned that shelter and occasional shade is necessary for a few days when they are first placed in the greenhouse, I must add, that should the weather prove dark, and cloudy, this work may be omitted: however, if hot sunny weather ensue, it will be indispensably necessary; and also, to water them twice or thrice a day when first potted, observing to wet the leaves as little as possible.

By the middle of June, it will be time to think of preparing the out-door departments, in which it is intended the plants should stand during the summer months.

The most eligible situations for this purpose are, the north aspect of vacant walls, or hedges, where they will be a little shaded from the noonday sun, or between rows of close hedges, particularly planted, and solely appropriated to this purpose. I can by no means espouse or recommend the practice, of setting them close under the shade or branches of large trees; as the plants are thereby inevitably drawn into a weak state in a few weeks, and those who adopt such situations, are not unfrequently under the disagreeable necessity of throwing away many of perhaps their most rare plants, every autumn; and even those that remain will have a bad unsightly appearance. Indeed shelter from the winds, is the great desideratum, to prevent their being upset, for in my opinion, most

greenhouse plants are fond of the warmth of the sun, except when recently potted, provided their roots are kept moderately moist. Let us look for a moment to the arid mountains of the Cape, and there we shall find them exposed to its full glare, and perhaps without water for months: their roots however can penetrate deeper there than they can possibly do in pot, so that life is preserved, and as soon as the periodical rains commence, they resume in a very little time their verdure, and "breathe their balmy fragrance all around."

Some gardeners' practice is to plunge them amongst the shrubs and flowers of the pleasure ground; this answers pretty well with the strong growing kinds; such as myrtles, geraniums, coronillas, &c., old plants or supernumeraries that will not be wanted to house in the autumn; and even has a very pretty effect when judiciously done; but it will by no means do for the tenderer species. Therefore, upon the whole, the most unexceptionable situations, are such as at the same time afford a moderate portion of shade, and are so situated, as to break the force of those strong gales, which frequently blow in the summer, and early autumn months, and yet allow that free circulation of air so necessary to the well-being of plants in general, and at all seasons. Having fixed on the place they are to stand, it must be thoroughly cleansed from weeds, and the hedges, if any, neatly clipped. It should then be well rolled, to make it perfectly firm and level, over it a layer of good lime, slacked, and made into the consistency of thick white wash, should be poured, and allowed to soak into the surface; this I recommend as being a strong preventative against worms getting into the pots; which is always injurious to the plants. When this is dry, let about an inch of finely sifted coal-ashes, be regularly laid on, and firmly rolled a second time.

Being thus prepared, the plants may be brought out and set regularly and level on the surface; in whatever form may best suit the situation or the fancy of the proprietor. Even on this subject a few observations may not be unnecessary.

Therefore in placing them, it should be endeavored to give them a loose, easy but yet judicious manner; which is by far more handsome than the stiff, shorn-like front admired by some: any plants that may be in flower, should be placed in conspicuous situations, but not so as to make the clump look in the least tawdry; simplic-

ity and neatness are the principal objects to be considered in this, as well as the other decorations of the flower garden; another circumstance to be remembered is, that now as their summer growth commences, it will be necessary to allow each plant sufficient room to spread according to its natural habit of growing; and also to be careful, that the curious tender sorts, (which are frequently the most valuable,) are not crowded by the large free growing kinds. Indeed they should be set as well as heaths, in a separate clump as they lose a good deal of their interest, by being confounded with large shewy plants that attract the eye, at the first glance, from the more delicate and minute, but to many not less attractive species.

Should the weather prove dry when they are thus set in their clumps, they must be freely watered; particularly in the afternoon, when the sun has nearly run his course. A good washing also with an engine, or syringe, at times in the absence of the sun, will be of considerable service to them; but if any individual plant should at any time become too wet, let it be placed apart from the rest, and not watered again until it evidently requires it; this is a circumstance which I shall have occasion to mention hereafter; all that is necessary now, for a few weeks, is to pick off dead or withered leaves, and weeds of every description; and a regular attention to the directions already given.

Art. VII. — *Equivocal Generations.*

However ridiculous it may now appear, yet there was a time when philosophers believed the material elements possessed the chemical power of producing vegetables without conforming to the ordinary laws of generation. The exertion of this extraordinary power, on account of the uncertainty attending its results, was very appropriately termed equivocal generation; but we should think its absurdity had been long enough exposed to prevent its imposing upon the most credulous and unthinking. But opposed as it is by all the laws of nature, so far as they are manifested by known analogy, it occasionally attempts to force itself upon our understanding, through the medium of some anomalous production — and there are men, even at the present enlightened day, who, if they cannot

explain the phenomena of nature, will adopt an inconsistent doctrine, rather than admit the loss of facts sufficient to establish a theory consistent with its known economy. Among this class of theorists we should expect to find a writer in a late Genesee Farmer, who, from the fact that chess was found growing in a field where it was not known to have been sown, and upon stalks of wheat, the heads of which had been bitten off by a horse, infers that wheat is converted into chess by some unknown process of nature.

Before we can consent to become converts to the doctrine of equivocal generation, the writer must furnish more conclusive evidence — for cases of the kind vastly stronger have presented themselves and been fully explained. The theory of the late President Dwight on these apparent cases of equivocal generation is simple, rational, and, in our mind, satisfactory. He says —"The seeds of vegetables, when lodged beneath the stratum of earth, within which they germinate, have no apparent tendency to decay; but continue to possess all their vegetative power through an indefinite number of centuries. When the existing forest is cut down, and its seeds are destroyed by cultivation, those, which were shed by a more ancient growth, being thrown up by the plough within the limits of this stratum, spring in their turn, and cover the surface with trees of a new kind."

In support of this theory he cites the following cases, which, among others, were within his knowledge. "A field about five miles from Northampton on an eminence called Rail Hill, was cultivated about a century ago. The native growth here, and in all the surrounding region, was wholly oak, chesnut, &c. As the field belonged to my grandfather, I had the best opportunity of learning its history. It contained about five acres, in the form of an irregular parallelogram. As the savages rendered the cultivation dangerous, it was given up. On this ground there sprung up a grove of white pines, covering the field, and retaining its figure exactly. So far as I remember, there was not a single oak or chesnut tree. Pines were as thick as they could conveniently grow; and when I first saw them, about the year 1760, had attained a considerable size. When I last saw them, more than 20 years afterwards, they were large trees; yet there was not a single pine, whose seeds were or, probably, had for ages been, sufficiently near to have been planted on the spot. The facts, that these white pines covered this field

exactly, so as to preserve both his extent and figure, and that there were none in the neighborhood, are decisive proofs that cultivation brought up the seeds of a former forest within the limits of vegetation, and gave them an opportunity to germinate. The regularity and limits of the processes are entirely inconsistent with the doctrine of equivocal generation.

"A respectable farmer in Guilford informed me, some years since, that thirty years before the event, to which I principally refer in this paragraph, took place, his father, while reaping a field of wheat, found a quantity of chess, which he directed the laborers to reap also, and bind in bundles to be carried home for fodder. On the day when the wheat was carried home, it was inconvenient to carry the chess; it was therefore thrown together upon a bank, or headland. The following night it was drenched with rain, and finally left to rot upon the place. Thirty years after this fact, the field having come by his father's death into the possession of my informant, it became necessary to make a new fence between that and another bordering upon it; but as a considerable number of bushes had grown up upon the head land, on both sides, he concluded to remove the fence, and break up these head lands. The ground was accordingly cleared and ploughed, and on the spot where the chess had been thrown, there sprung up a new crop of chess, as evenly spread, as if it had been sown by a skillful hand.

"The Hon. Judge Reeve of Litchfield, told me some years ago, that a farmer of his acquaintance, having sown some turnips, and suffered some of them to remain on a field, they produced seed, the following year, which was scattered on the ground. For twentyfive years afterwards, i. e. to the time when the fact was mentioned to me, whenever this field was ploughed, turnips in considerable numbers sprung up in this spot.

"Mr Parker, an English gentleman from Yorkshire, who came some years since to the United States as the Agent from the merchants of England to the government of this country, informed me, that a tract of marshy ground on the eastern shore of England had, some years before, been purchased by several gentlemen and drained. On the earth, which was thrown out of the ditches cut through it, there sprung up a great quantity of white mustard. As this plant had not been known to grow anywhere in the vicinity, within the remembrance of any living man, its appearance excited

much curiosity. After many schemes to account for it, had been prepared, and rejected, it was found that, two hundred years before, white mustard had been extensively cultivated on the same spot, by a colony of Dutch settlers.

"I will conclude these observations by mentioning a remarkable fact communicated to me by the Hon. Judge Chipman of Vermont. This gentleman told me, that when he resided at Kingston, in the county of Addison, there customarily sprung up, in the cultivated fields, on his estate, an immense multitude of cherry trees, of a peculiar species. The original forest had been composed of beech, maple, hemlock, &c., and appeared as ancient as any American forest whatever. It was perfectly destitute of cherry trees. As he was walking in a field, newly broken up, and recently ploughed, he observed the infant stems of these cherry trees sprung up in very great numbers. His workman, who believed in the doctrine of equivocal generation, triumphantly asked him whence he supposed these trees to proceed? Without answering the question, he forced his hand a little distance into the earth, and drew up a handful of cherrystones."—*Silk Cult.*

Art. VIII. — *Heartsease.* By Mr. Todd.

Having paid considerable attention to the propagation and subsequent culture of the Heartsease, I am induced to send the following observations upon this interesting and beautiful flowering plant, hoping it may be of some interest to those who read it.

So strikingly handsome and attractive are the flowers, and so easy of propagation, generating at a most surprising rate, that I hesitate not to say, that the Heartsease will, ere long, become the pride of every garden, from the humble cottage to the splendid palace.

The family of this pretty flowering plant, comprises a vast variety of colors and form. It is to me, quite astonishing that such perfect flowers should have been produced by their progenitors. I could refer to many such by name, but as some of the readers of the *Cabinet* may not know them, I beg to state what are, in my opinion, the properties of a good flower. Whatever the colors are, they should be clear, and distinct; not blended and suffused together. The

flower should be as broad as it is long, and the two upper petals should occupy about one-half, and the lower petal be about one quarter, the two side petals exhibiting to *front view* the other quarter. The whole of the petals should join neatly together so as to form a *flat* surface, combining to compose a circle, as near as may be, allowing for a small deviation from the circumference line at the places where the petals meet, and the incurvature of the lower edge of the bottom petal. The merits of the flower are judged by its perfection of form in the above respects, and not to size, a large wavy edged, or wavy surfaced flower, would be far inferior to a small one possessing the properties above described. On no account should size be substituted for form in estimating the merits of the flower. The mode of treatment I pursue, is simple, but very successful.

Early in May I take off the small suckers that are appearing above ground, of which there is usually a free supply from the old parents, I cut them off close to the old plant, at a joint; I then pot them off in sand, about an inch of each being inserted therein. I water them well at that time to settle the soil close to the stems, and in an *hour* afterwards I cover them closely with a hand glass, which is not removed from off them till they are rooted, this is easily ascertained by the tops pushing.

I take care to shade them on sunny days. When rooted, I take them up and transplant them into a nursery bed, in a warm situation, there they remain till about the middle of July, at which time I put them out, with as much earth adhering to the roots as possible, into the places where they are intended to bloom, which they will do all the end of the summer and autumn, and flourish exceedingly fine the following spring.

When the plants have grown very vigorously, and the shoots are long, I cut them down rather closely, after which they soon recover. By this mode of treatment they very far exceed anything I ever saw of Heartsease elsewhere.

I never keep plants beyond the second year, as they get too bushy, and the flowers are small, compared with those the year old plants produced. The soil I bloom them in, is as follows; — Two parts loam, one part sandy peat, and the other well rotted hot-bed dung; these are well blended together.

Those plants I intend to grow for producing flowers for exhibition, I plant in a half shady situation, the colors are thus preserved pure and clear.—*Floricultural Cabinet.*

Art. IX.—*Gardener's Work for April.*

The first thing this month to be attended to, is the hot-bed, if it has not already been made. We know that there are many who pretend to have a good kitchen garden, and yet have never had a hot-bed; but in our climate it is impossible to have a complete assortment of vegetables in their season without one. Were it only for one vegetable, the tomato, we would have a hot-bed; but there are many others, that will more than pay all the trouble and expense. Plants of various description may be forwarded and turned out or transplanted in the open ground in May or June. We have been informed that in Denmark, melons are planted in the hot-bed in small, cheap, open baskets, which are transferred to the open ground without disturbing the roots; being full of holes, the roots meet with no obstruction, and the basket soon decays. Tomatoes may be planted in the same way. Cucumbers for early use may be obtained a month earlier by the same treatment, and we venture to say much cheaper than to plant in the open ground in May, with the usual perplexities of having to plant three or four times over, and the continual watching for destructive insects, which make such havoc with weak vine plants. Many plants of ornament cannot be enjoyed without a start in the hot-bed, and when we consider how much may be added to the kitchen and flower garden, we would recommend to every one who has a garden, to make one without delay. We suppose a majority of our readers are fully informed upon the subject; but for those who are not, we give the following instructions, copied from M'Mahon:

Frames.— Large frames ought to be made of inch and a half or rather two inch plank, of the best yellow pine, 9 ft. 2 in. long, 4 ft. 10 in. wide, as high again in the back as in the front, to give the top a due slope to the sun and a proper declivity to carry off the wet when covered with glass lights, to move off and on occasionally; every joint ought to be tongued, the better to prevent the admission of cold air into, or emission of warm air out of the bed, but in such manner, as the gardener may think proper. The back and front are to be nailed to corner posts, so as to admit the ends to fit in neatly, which ends are to be made fast to the posts by iron bolts,

keyed in the inside, for the greater facility of taking the frame asunder when necessary; each end must be made one inch and a half higher than the back and front, so as that one half its thickness may be grooved out on the inside, for the sash to rest and slide on, and the other half left for its support on the inside; when finished, give it two or three good coats of paint before you use it, and with a little care and an annual painting, it may last you twenty years.

These frames will take three lights of three feet wide each, each light containing five rows of glass frames, six inches by four, overlapping one another about half an inch, which, of all other sizes is the most preferable, on account of their cheapness in the first place, the closeness of their lap, their general strength and trifling expense of their repairs; however each person will suit his own convenience as to the size of the glass. Where the sashes when laid on the frame meet, a piece of pine about three and a half inches broad and near two thick, should run from back to front, morticed into each, for their support, and for them to slide on; in the centre of which, as well as in the ends of the frame, it will be well to make a groove five eighths of an inch wide and near a quarter of an inch deep, rounded at bottom to receive and carry off any wet which may work down between the sashes.

Method of making a Hot-Bed.—Provide the requisite supply of good horse stable dung, consisting of that formed of the moist stable litter and dunging of the horses together, choosing that which is moderately fresh, moist and full of heat — always preferring that which is of lively, warm, steamy quality, and of which take the long and short together as it occurs, in proper quality as above. If the dung is rank it would be proper to prepare it a little to an improved state, more successful for that purpose, by forking the whole up into a heap, mixing it well together, and let it thus remain eight or ten days to ferment equally, and for the rank steam and fierce heat to transpire.

Choose a place on which to make your hot-bed in a dry sheltered part of the garden, open to the morning and south sun; it may be made either wholly on the surface of the ground or in a shallow trench, of from six to twelve inches deep and four or five feet wide, according to the frame: if made on the surface, which is the most eligible, it affords an opportunity of lining the sides of the bed with fresh horse dung, quite down to the bottom, to augment the

heat when it declines, and also prevents wet from settling about the bottom of the bed, as often happens when made in a trench, which chills the dung and causes the heat to soon decay.

Then according to the size of the frame, mark out the dimensions of the bed, either on the ground or with four stakes, making an allowance for it to be about four or five inches wider than the frame each way; this done, begin to make the bed accordingly, observing to shake and mix the dung well as you lay it on the bed, but I would not advise treading it; for a bed which is trodden hard will not work so kindly, and be more liable to burn than that which is suffered to settle gradually itself: proceed in this manner until the bed has arrived at the height of four feet, which will not be too much, making an allowance for its settling six or eight inches, or more, in a week or fortnight's time; and as soon as finished, let the frame and glass be put on: keep them close till the heat comes up, then raise the glass behind that the steam may pass away.

The next thing to be observed is about earthing the bed, in which to sow the seed, and for which occasion should have a proper supply of rich, light, dry earth, or compost, ready at this season, under some airy shed or hovel, covered at top to keep out rain, that the earth may be properly dry; for if too moist or wet at the time, it would prove greatly detrimental both to the growth of the seed and young plants, as well as be very apt to cake and burn at bottom next to the dung, by the strong heat of the bed: three or four days after the bed is made prepare to earth it, observing previously if it has settled unequally, to take off the frame and glasses, and level any inequalities; make the surface smooth, put on the frame again, and then lay therein as much of the above mentioned earth as will cover the whole top surface of the bed about three or four inches thick. In two or three days you may sow your seeds, after which put on the lights or glasses close, but when the steam rises copiously give it vent by raising one corner of the upper end of the lights half an inch. Cover the glasses of the hot-bed every evening an hour before sunset, if mild weather, earlier if bad, with garden mats, uncover them every morning between 8 and 9 o'clock. The plants should have air every day.

Cabbages.—Sow all the early varieties of cabbage seed, and by the time the earth is warm enough to receive the plants into its bosom in the open air, they will be ready to be removed thither,

and if judiciously managed in setting out and after culture, they will head a month sooner than those planted in the open ground.

OPEN GROUND.

Carrots and Parsnips. — As soon as the frost is out of the ground, you may begin to sow the seeds of these roots and thence up to the first of June; the sooner they are in the larger the roots will be. The early horn carrot is said to be the best for early use, and the long orange for the main crop.

Onions. — It is said by the knowing ones that onions should be be sown in the old of the moon in April; but we have always sown without regard to the moon, getting in the seed by the 20th if possible, as it does much better than to omit it until the first of May.

Peas. — As soon as the frost is out of the ground, all sorts of early peas should be sown: this is generally the case about the first of the month; they are very hardy and not injured by frost and the light falls of snow which sometimes occur this month. Peas should be planted at intervals of a week or two throughout the spring, to secure a succession of crops throughout the season. "The soil most suitable for peas, is a light sandy loam, though they will grow well in any ground, except it be in a stiff, tenacious, cold clay. From three to four feet is a good distance for the rows to be apart, the peas to be dropped about four inches asunder. Generous manuring tends not only to increase the quality of their product, but to accelerate the maturity of the pea family. The peas should be stuck before the plants throw out runners.

Windsor Beans. — All of this tribe of vegetables may very safely be planted in open culture about the 20th of this month.

Asparagus.—Your asparagus beds should be forked and dressed as soon as the frost is out. In forking be especially careful to stir and loosen every part of your beds, and equally so not to go deep enough to wound the crowns of the roots.

If you desire to make new plantations of this vegetable, you may with perfect safety put out your plants as soon as the ground is rid of the effects of the winter frosts.

Turnips. — If you have a desire to have early turnips for your table, sow the seed any time after the 20th of this month.

Lettuce, asparagus, cabbages, broccoli, cauliflower, sea kale, &c.

may be sown any time this month to succeed such as may be forwarded in the hot-bed.

Early Potatoes. — Should the weather admit, you should get in your *early potatoes* from the middle to the latter end of the month. But all efforts will be useless, unless you give a liberal supply of manure, and bestow much care in the preparation of the soil. Your ground should have a southerly exposure, and if not a good soil naturally, should be made so by art.

"All the fruit trees in your garden may now be advantageously trimmed and pruned —so also your gooseberry, currant and raspberry bushes; the cuttings taken from the three last should be planted out to form the material for future plantations of these excellent and healthful fruits. Let the ground be thoroughly stirred around the old bushes.

Grapes. —The earlier after the frost is out of the ground that you transplant vines, or put out your cutlings the better, for it is important that they each start in their growth with the earliest vegetating power of the earth in spring.

Rose, snow-ball, lilac, and all other bushes of the flowering tribes, should be set out as early this month as possible.

As soon as the plants in your strawberry beds push through the earth, the beds should receive a dressing. Clear out all the weeds, decayed leaves, and old runners: loosen the earth around the plants, and apply some rich mould about them, digging it in so as to prevent a loss from evaporation or washing."

Herbaceous Plants. — Herbaceous plants of every description should be removed if necessary, as soon as they begin to grow, which will be the case with most kinds during the month; the present is also a suitable time to propagate many sorts.

J. B.

Art. X. — *Miscellaneous Articles.*

On Tree Mignonette.—Sow seed of the common Mignonette, towards the end of February, in pots of the size thirtytwo's, such being near six inches deep, and four and a half in diameter, inside measure. Use a good rich loamy soil. After the seed is sown, place the pots in a cucumber or melon frame. When the plants are up, they must be placed where they can get air, to prevent their being drawn up weakly as well as to preserve them from damping off. When the plants have made a few leaves, pull up all the plants but two, which must be allowed to remain till they get over danger from damping off, when the best may be retained and be secured to a support. As the plants grow, side shoots will push, they must be pinched off, always leaving the leaf at the base of each shoot which contributes to its growth. If the leading shoot should shew flower, it must also be pinched off.

When the plants have grown ten or twelve inches high, they may be removed to a warm part of the green house. Water must be given when the plants are dry. As the season advances the plants must be placed in more airy situations, which will gradually harden them. When the plants have reached a desirable height, from half a yard to two feet is desirable, pinch off the heads. This will induce a number of lateral shoots to push and form a bushy head. Plants thus treated will blossom early the following spring; after they have shewed flowers, the plants, if vigorous, may be removed, with balls entire, into pots a size larger; they will then blossom all the season.—*Flori. Cabinet.*

To Obtain Flowers from Bulbous Roots in three Weeks.—Put quick lime into a flower pot until it is rather more than half full: fill up with good earth: plant the bulbs in the usual manner: keep the earth slightly damp. The heat given out by the lime will rise through the earth, which will temper its fineness: in this manner, flowers may be obtained in three weeks.—*Magazine of Domestic Economy.*

On the Contrasting Colors of Flowers to Produce the Best Effect.—To demonstrate the theory of colors; then, a circular card may be divided into seven compartments, by lines drawn

from the centre to the circumference, one compartment being painted red, the next orange, the third yellow, the fourth green, the fifth blue, the sixth purple, the seventh violet. Let water colors or patterns of ribbon, of each of these respective colors, be procured, and arranged in the enumerated order. It will be found that any one of these colors is producible, by due admixture of the two adjacent colors. The first and third, red paint mixed with yellow, produce the second color, orange. The second and fourth, orange mixed with green, produce the third, yellow: the third and fifth, yellow and blue, generate green, the fourth color; that and the sixth, form the fifth, blue; the fifth and seventh, violet, create the sixth, purple; the sixth and first, red, constitute the seventh, violet; the seventh and second, orange, terminate in the first, red. What then is the necessary conclusion, but that in the order of prismatic colors, adjacent colors are inharmonious; and that harmony results only from union of two colors, distant in order by one intermediate tint? The principle productive of harmony being thus discovered, may receive confirmation, by experiments with ribbons of different colors, blended, or with sewing silks twisted, in the preceding order of arrangement. Yet, beauty resulting not only from harmony, but also from contrast, the next inquiry is, from what principle to produce the latter effect. It is discoverable from the following experiment. To patterns of ribbons or silk, of the seven preceding colors, let white and black be added; and all be placed in a perpendicular line, the white above the red, the black beneath the violet, adapting the numbers to the altered arrangement, the white being denominated one, the red two, and so on, the violet being marked eight, and the black nine. By advancing black to the side of white, or as it is accounted the absorption or absence of all colors to the accumulation or presence of all, the strongest possible contrast is produced. Violet and purple will also contrast with white, in decreasing ratio; while the remaining colors produce a very inferior degree of contrast, by no means eligible from their approximation to white, in graduated reflexion of light. On a similar principle, the best contrast to black next to white, is red, as the colors ranking first of the seven in order of refraction, therefore first in the power of reflexion; orange is an inferior contrast, but yellow, blue, purple, or violet, from graduated absorption of light, present no contrast to its entire absorption, black. In the same manner red receives no contrast

from the two nearest colors in the prismatic gradation, orange or yellow, but from the semicolor green ; it admits the lowest contrast in blue, higher in purple, or violet, and the highest as already remarked, in black. The decisive inference then is, that contrast is not producible without passing over two prismatic colors at least. Such being fixed laws, constituting the primary principle of the theory of colors, and demonstrable by experiments multifarious and conclusive, their application to landscape gardening and the disposing of flowers in the flower-garden, &c., involves not the slightest difficulty, and solves numerous phenomena. Why, for instance, does verdure, or why do shrubs, supply the best relief to gaudy flowers ? On account of excellent contrast, green being a sober color intermediate between the deeper and higher tints, consequently affording a foil to all.

Why is snow injurious to the effect of foliage, or flowers, of every graduated tint ? On account of its glaring whiteness, supplying neither contrast nor harmony ; white entering into the composition of every shade of tint, and particularly being productive of semicolors ; consequently, being a component principle, when uncombined it can neither harmonize, nor contrast with itself. Why does the olive tint of the expanding oak leaf offend the eye of taste ? Because, its being composed of green in combination with yellow, the component principle can neither harmonise nor contrast with itself, in a simple compounded tint, in the surrounding grass, or foliage of more forward trees. Why does the verdant herbage of spring produce inferior picturesque effect, in ground ornamented with trees, than the sterile grass of early autumn, consequent on mowing ? Because, spring grass and foliage are gradations of one and the same color, consequently, in whatever variety of gradation, the diversified tints of any color, neither harmonizing nor contrasting, cannot possibly be productive of picturesque effects.

Contrariant is the effect of sterile grass, on account of its russet tint, like ripened corn, presenting advantageous contrast ; russet being a semi-color, uncompounded of green. Countless natural phenomena, with their solutions, might be multiplied, illustrative of the preceeding theory of colors being of practical utility in gardening.—*Dennis's Landscape Gardening.*

THE PITCHER-PLANT. — There is not, perhaps, among the numerous examples that occur of the provident economy of nature, in the vegetable part of the creation, a more remarkable instance of contrivance adapted to circumstances, and of means suited to the end, than what is evidently displayed in a plant which is commonly met with in Ceylon, and other islands of the east, and which has obtained the appropriate name of the Pitcher-plant. Being the inhabitant of a tropical climate, and found on the most dry and stony situations, nature has furnished it with the means of an ample supply of moisture, without which it would have withered and perished. To the footstalk of each leaf, near the base, is attached a kind of bag, shaped like a pitcher, of the same consistence and color as the leaf in the early state of its growth, but changing with age to a reddish purple. It is girt round with an oblique band or hoop, and covered with a lid neatly fitted, and movable on a kind of hinge or strong fibre, which passing, over the handle, connects the vessel with the leaf. By the shrinking or contracting of this fibre the lid is drawn open whenever the weather is showery, or dews fall, which would appear to be just the contrary of what usually happens in nature, though the contraction probably is occasioned by the hot and dry atmosphere, and the expansion does not take place till the moisture has fallen and saturated the pitcher. When this is the case the cover falls down, and it closes so firmly as to prevent any evaporation from taking place. The water having gradually absorbed through the handle into the footstalk of the leaf, gives vigor to the leaf itself, and sustenance to the plant. As soon as the pitchers are exhausted, the lids again open, to admit whatever moisture may fall; and when the plant has produced its seed, and the dry season fairly sets in, it withers with all the covers of the pitchers standing open. — *Barrow's Cochin China.*

A MODE OF PRODUCING TWO CROPS OF GRAPES, IN ONE HOUSE, IN ONE YEAR.— Loudon's October number of his *Gardener's Magazine* contains an account, by a correspondent, of his method of cultivating the grape, by which he obtains two crops in one year, and had not, for the space of five years, lost a single crop. He has but a limited quantity of glass, and that of the worst sort, being that he had used over his pine pits. He has a house 30 feet long, 16 feet rafters, 30 inches front glass, with eleven vines planted outside; five

of which are excited for the spring crop, and six for the autumn, crop. The five vines were turned out of the house in the middle of May, 1835. When the six vines for the late crop were introduced, those turning out were laid upon a flat trellis in front of the house. the wood being ripe at the end of July, at which time they were pruned upon the spur system. Each vine was divided at the entrance into the house, and formed into two principals, which are the full length of each of the rafters. In a week or so after pruning, the vines were covered, to keep them both cold and dark, until Oct. 26, when they were introduced into the house, and the six others placed in their situation. These six had been introduced in the middle of May, 1835, and had matured their crops, and ripened their wood. The other five had sprung their buds above an inch when put into the house, and were pruned with two stems, one vine being divided at its entrance into the house, and made into two principals, so that the rafters were completely furnished. The crop was 180 lbs., independently of what was cut for the table of Mr Loudon's correspondent.

The five vines taken in on October 26, were immediately wrapt with coarse sacking and well moistened with cold spring water. The house was kept low, until every bud had sprung or swelled, when the sacking was released, and in a few days taken off. The buds all pushed vigorously, and were in full bloom by Christmas morning. The usual hot-house rules were followed afterwards; only keeping the house cool in the evenings. Instead of a high moist heat, a cool dry atmosphere is necessary. The fuel used was small coal made into the form of bricks with clay.— *Balt. Far.*

Potatoes.—Every experiment in the production of this estimable root, is interesting to the public, and none can be more so than the following. The Rev. Mr Ramsay of Arbroath, Scotland, commenced digging early potatoes on the 28th of June, which he had planted in his garden; and after removing the potatoes, he immediately replanted the stems. On the 12th ultimo, he commenced digging a second time, and although the first crop was considered good, the second was found superior — more numerous, larger, and of better quality.

On Cultivating the Erythrolena Conspicua.—My pleasure ground is laid out with small clumps of different shapes. One clump is planted with white dahlias, another with yellow and so on. I am fully convinced that by having each clump planted in this manner, the superiority of one flower over the other is more fully seen and the effect more striking. The clump next to the one planted with white dahlias I had planted with erythrolena conspicua, and I do assure you the effect was most beautiful. The plant is of very easy culture; I recommend the seed to be sown under a hand-glass in March, and when the plants are three or four inches high, to be placed singly into pots, and kept in a frame until the middle of May, when they may be turned out of the pots into the clump. The soil I find them to thrive the best in, is a rich loam. I have had plants this season from five to seven feet high, and completely covered with fine large bright scarlet flowers. Should you consider this worth noticing, you shall hear from me again.—*Flor. Cab.*

Beautiful Varieties of Pinks. — Very many beautiful varieties of the pink may be obtained by the following process: Just before sunrise, carefully open the flower to be operated upon, and extract the anthers with small pincers. About nine o'clock, place the ripe pollen upon the stigma of the flower, and repeat this two or three times in the course of the day. If the act of impregnation has taken place, the flower will fade in 24 or 36 hours, but if not, it will remain in bloom and beauty, in which case the attempt must be repeated. This should be done in fine weather, and the flower should be defended from rain or mist. Plants raised from the seeds which have been crossed, bear the form of the mother, but take the color of the male parent. These are less visited by bees than others. These are curious facts. — *Southern Ag.*

To the Ladies.—It is said, if you fill flower pots about half full of quick lime, cover over this a good mould, the flowers may be thus obtained in a very short time and at all seasons! The earth should be kept slightly moistened and pressed down whenever it rises by the swelling of the lime. — *Ib.*

Oil from Vegetables. A discovery has been made in England, by which oil may be obtained in greater abundance from the seeds of vegetables, by applying to them diluted muriatic acid.—*Ib.*

QUINCY MARKET.

(Reported for the Horticultural Register.)

APPLES, Baldwins	barrel	2 00	2 25
Greenings,	"	2 00	2 25
Russetts,	"	2 00	
Bell flowers	"	2 50	
PEARS, Iron,	bushel	3 00	
CATHARINE,	"	3 00	
CRANBERRIES,	"	8 00	8 50
CHESNUTS,	"	3 00	3 50
CAULIFLOWERS,	head	37	75
CELERY, White Solid, and Rose Colored,	root	12	25
CABBAGE, Red Dutch,	dozen	50	62
Green Globe Savoy,	"	62	75
Large Drumhead,	"	50	75
HORSE RADISH,	pound	10	12
RADISHES, Early,	bunch	12	
Turnip Rooted,	"	12	17
LETTUCE ROSE or Tennisball,	head	6	8
POTATOES, Chenangoes,	bushel	75	1 00
Eastport,	"	75	1 00
St Helena,	"	1 00	1 25
DANDELIONS,	½ peck	75	
SQUASHES, Crook neck,	pound	9	10
Valparaiso,	"	5	6
SHAGBARKS,	barrel	4 00	4 25
ONIONS, White Portugal,	bushel	1 00	1 25
Red,	"	1 00	1 25
Bunch Onions,	hundred	4 00	4 25
PICKLED CUCUMBERS,	gallon	31	37
DRIED APPLES,	pound	4	5
LONG BLOOD BEETS,	bushel	1 00	
PARSNEPS, Large Dutch,	"	75	1 00
TURNIPS, White Flat	"	50	
Ruta Baga	"	50	
Long Yellow French,	"	50	

Boston, March 25, 1837.